CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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THIS IS UNEVALUATED INFORMATION 50X1-HUM

1. The Avtozavod imeni Stalina (ZIS) (Stalin Automobile Plant) was in the southern part of Moscow, about 5 km south of the Kremlin on the eastern bank of the Moskva River. The plant was located in a loop of the Moskva River. There was a large freight station at the southeastern edge of the plant and farther south was a power station. The plant had spur tracks to the railroad station and a system of tracks within the plant area. Transportation facilities included about 10 plant locomotives and numerous railroad cars. there were about 150 railroad cars. Materials were transported within the workshop buildings by electric trucks operated by storage batteries. There were from 120 to 200 electric trucks in the plant. A large part of the raw materials, components and fuels (Energiestoffe) required for the plant arrived by water and was unloaded in the southern harbor of the Moskva River, some kilometers southeast of the plant. 50X1-HUM

2. A few installations of the plant dated back to the pre-revolutionary era. However, the plant itself was not built before the late twenties and since then had been repeatedly improved and modernized. Some machines and part of the workers were evacuated to the east during the war. Air raids caused only slight damage to some workshop buildings which were repaired during the war. After the war, the plant was extensively reequipped with new machines. installations dismantled in the Opel Plant in Brandenburg were also used, including a conveyor belt for the final assembly department. Five various new construction projects. The power station was expanded to double its previous size and a new smokestack was built. A new workshop building was constructed and another one, the construction of which had started before the war, was completed in the southeastern part of the plant. One additional furnace was set up in Foundry No. 2 and three additional furnaces in Foundry No. 3. 50X1-HUM 50X1-HUM

3. The plant covered an area of 1 square km. the workshop buildings occupied 60 percent of the plant area. The main departments of the plant included Foundries Nos. 1, 2 and 3; a forge; a punching and pressing shop for car bodies; a tool shop; a machine shop and an assembly department for engines; a machine shop and an assembly department for sedans and busses; and a machine shop and an assembly department for trucks. Power was supplied from a power station located south of the automobile plant. There was a transformer station in the plant itself. There were no power failures. 50X1-HUM 50X1-HUM

4. ZIS-type trucks, sedans and busses were produced in this 50X1-HUM

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plant. Modern deluxe sedans, modern busses, and ZIS-5 type trucks with angular fenders known from wartime, were reported to have been manufactured in 1947. The 1949 production allegedly included ZIS-110 type sedans, sometimes also built as ambulance cars, ZIS-154 type busses and ZIS-150 and ZIS-151 type trucks. About 60 percent of the trucks produced were ZIS-150 models, some of which were built with fixed bodies and some as dump trucks. [redacted] a 50X1-HUM test production of armored reconnaissance cars and half-track motorcycles in 1949. The production figures varied considerably. [redacted] 50X1-HUM [redacted] the production from 1947 to 1949 was impeded by a high percentage of waste. [redacted] almost all the engine blocks had to be 50X1-HUM rewelded after casting. The waste percentage in the production of other components was also high. Production stoppages occurred because of inadequate deliveries of structural steel and other components supplied from outside plants. In the autumn of 1949, the daily production included about 140 ZIS-150 trucks, about 30 ZIS-151 trucks and 1 to 2 busses. Twelve sedans were produced daily in April 1949. Propaganda posters stated that a total of 100,000 motor vehicles of all kinds was scheduled to be produced in 1950. Items produced for outside plants included 6-cylinder gasoline engines for other automobile plants, 4-cylinder Diesel engines for a Moscow tractor plant, and frames for subway tunnels. 50X1-HUM [redacted] the frame production reached 20 to 25 frames daily by mid-1949. 50X1-HUM

5. Coal for the power station arrived from the Moscow brown coal district. Fittings, electrical equipment, wheels and tires were supplied by other Moscow plants. Steel bars and sectional steel were supplied by a Moscow steel plant. The 50X1-HUM deliveries were frequently delayed which hampered the production.

6. [redacted] the plant had 40,000 employees in 1949, of whom 40 to 50 percent were women. Three 8-hour shifts were worked. Also 250 to 300 PWs were employed as auxiliary workers in the production departments.

7. The plant was surrounded by a wooden fence, about 2 meters high, and by watch towers. Some departments on the plant area were separately enclosed by wire fences. The plant was guarded by armed plant police. 50X1-HUM

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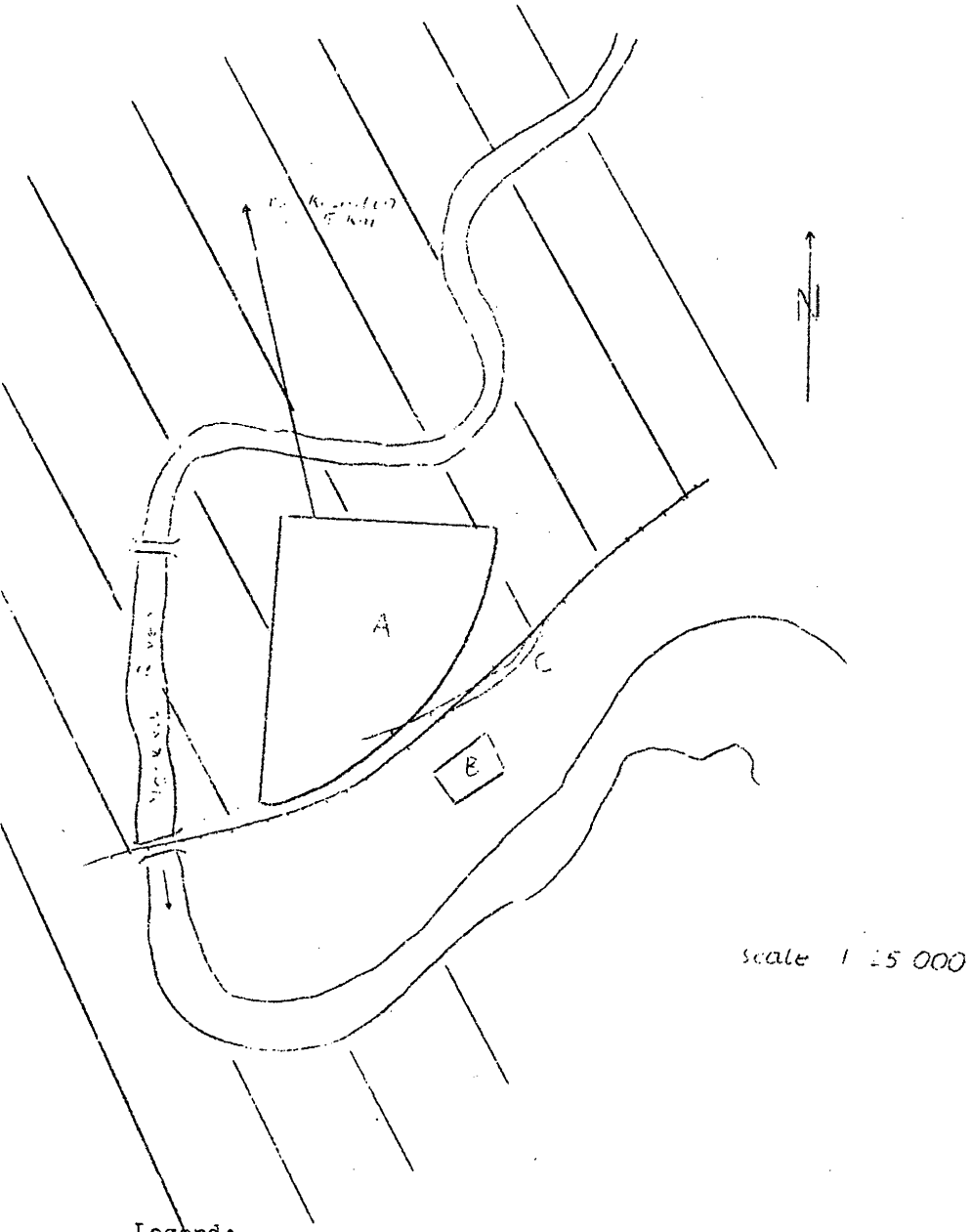
[redacted] Comment. The following is known [redacted] concerning the history of the ZIS Automobile Plant:
At the outbreak of World War I the first installations were established under the control of the AMO Firm (Aktsionernoye Moskovskoye Obshchestvo) (Moscow Corporation). In 1915, the first 1,500 trucks were constructed according to a Fiat patent. The construction of engines started in 1921 and 19 engines were delivered for the first Soviet tanks. In 1923, the plant was equipped for the construction of motor vehicles. The production totaled more than 1,000 AMO-F-15-type trucks by 1925. From May 1929 to 1 October 1932, the plant was reconstructed [illegible] reach a capacity of 25,000 [illegible] In 1932, the production increased to 21-times the 1931 production. The [illegible] reconstruction which lasted from 1929 to 1937 and was scheduled to triple the production. In 1936, the daily production had increased to 240 automobiles. In 1940 and 1941, the plant was partly converted to armaments production, but the manufacture of trucks continued for the time being. In October 1941, a large part of the installations and many workers were evacuated to Miass (N 55-02, E 60-07), Ulyanovsk (N 54-20, E 48-24), Chelyabinsk (N 55-61, E 61-24) and Shadrinsk (N56-05 E 63-38), where they became the nucleus for new

automobile plants. In 1942, the construction of ZIS-5 type trucks and of the ZIS-42 type cross-country trucks was started in Moscow. At first these trucks were only assembled there. The production of automobile components was resumed in 1943. The third reconstruction stage lasted from 1946 to 1950. During this period, 35 percent of the machine equipment was scheduled to be modernized. The production of the new ZIS-110 sedan started in 1946. The ZIS-154 bus was turned out in 1947. The new ZIS-150 type and ZIS-151 type trucks were being produced in 1948, and the construction of the ZIS-5 model was suspended. In addition to these models, the ZIS-156 type truck which is the ZIS-150 truck operated with bottled gas (Gasflaschenbetrieb), the ZIS-155 type bus and the ZIS-585 type dump truck were produced in the following years.

Location Sketch of the ZIS Automobile Plant in Moscow



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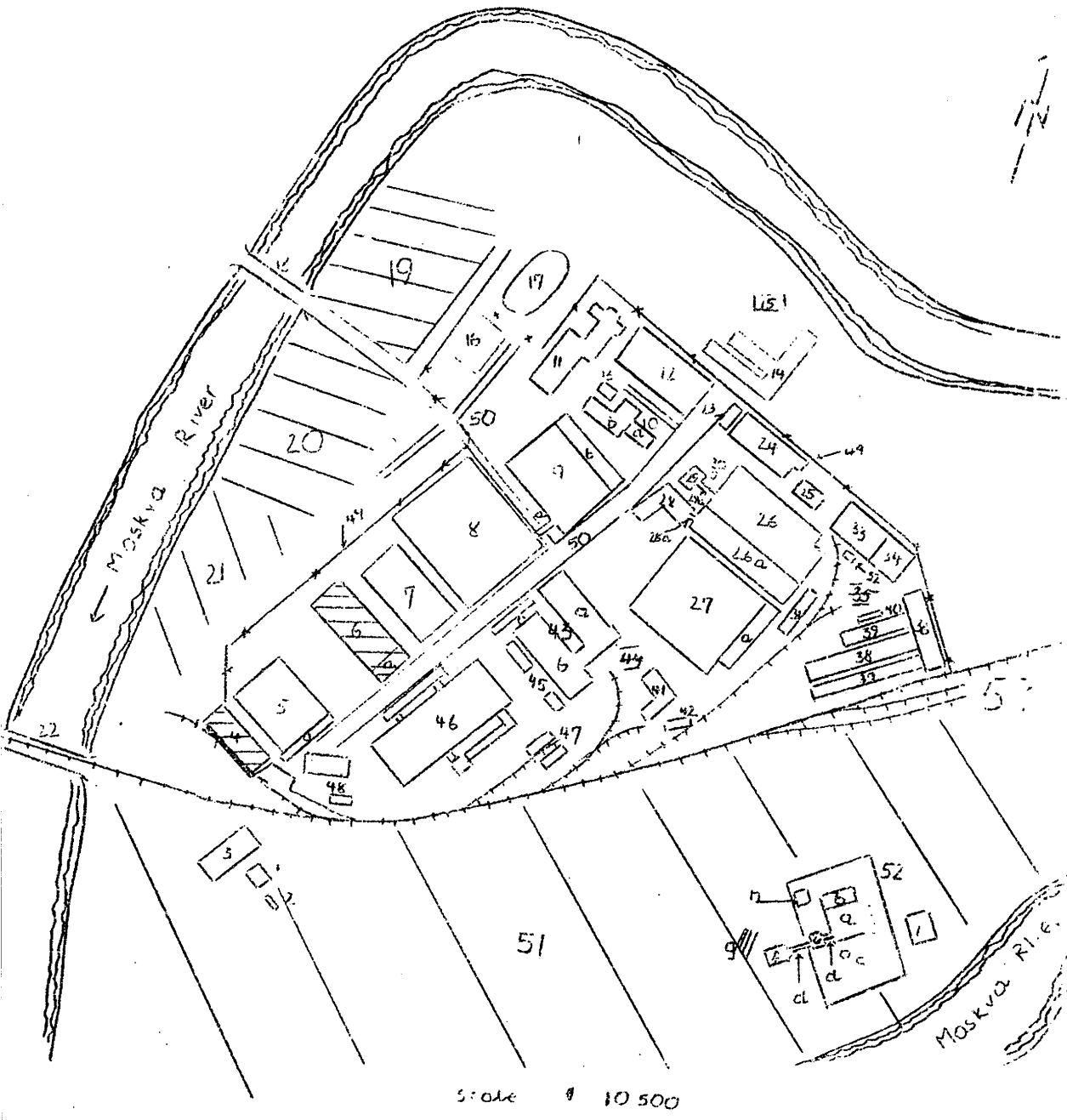
A. ZIS automobile plant
B. ZIS power plant
C. Freight station

Layout Sketch of the ZIS Automobile Plant in Moscow



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Legend:

1. Department for household items and enameling installation. The production of this department included kitchen pots and ice skates.

2. Utilizatsiya department where beds and other household items were manufactured from metal scrap.

3. Asphalt factory. 50X1-HUM

4. New workshop building, completed in rough brickwork by August 1949. The machines were being set up. It was rumored that the installation was to be a spring forge. [redacted] it might also the department for the construction of half-track motorcycles.

5. Mechanical repair shop and electrical repair shop. Its equipment included several lathes, planers and fully automatic machines. Screws, rivets, bushings and other small parts were produced. Electric motors were repaired in one section.
   a. Office building.

6. New workshop building, the construction of which started before the war. The installation of cranes began in 1949. The workshop was scheduled to be put into operation in 1950. Its future use was not known.
   a. Office annex.

7. Department for the production of radiators and fittings.

8. Pressing shop and punching shop equipped with several electrically or hydraulically operated presses. Chassis components, car body components, fenders and gasoline tanks were produced here.

9. Department for the assembly of ZIS-154 busses and ZIS-110 sedans, with an assembly line. A connecting passage (a) for the delivery of components led from the pressing shop to the assembly shop.
   b. Multiple-story annex which housed the upholstery shop, the leather shop, the spray-painting shop and offices.

10. a. Hospital.
    b. Central mess hall.

11. Technical school for plant employees and for training apprentices.

12. InstrumentalnyyTsekh (tool making shop), also called the first machine shop. All kinds of tools for plant requirements and for motor vehicles were produced here. The installation included a small forge, a machine shop equipped with many machine tools, some of which were fully automatic, and a nickel-plating shop.

13. Food and material warehouse for the kitchen and hospital.

14. Old foundry which apparently did not belong to the automobile plant.

15. Avto-Baza (sic) with parking lot, repair shop and filling station.

16. Experimental department. In 1946, foreign truck models were experimentally reproduced. Armored reconnaissance cars and half-track motorcycles were tested in 1949. There is said to be an engine testing stand in this department.

17. Athletics field.

18. Wooden bridge across the Moskva River, with a streetcar line over this bridge.

19. Residential buildings and sheds near the Moskva River.

20. Unloading point for building materials and storage place for stone, gravel and sand. Slag concrete stones were produced on this site.

21. Dump for the storage of iron parts. The steel structures for the new workshop buildings were completed on this site.

22. Railroad bridge. A steel structure consisting of three arches with two piers in the water.

23. Technical designing office and pattern-making shop. Wooden and plaster patterns were made.

24. Foundry No 1 equipped with 3 coke-fired ovens and 2 electric furnaces. Various components such as flywheels, balls for ball bearings, large machine components, and arched girders for the Moscow subway tunnels were cast in this foundry.

25. Entrance check point. Guard station.

26. Machine and assembly shop equipped with many modern machine tools. Engine blocks and all small components for engines were processed and hardened in this shop. [redacted] the engines were also assembled in this shop, but they could not confirm this. 50X1-HUM
a. Final truck assembly shop, equipped with two assembly lines.

27. Machine shop equipped with many modern machine tools for processing motor vehicle and engine components. Materials were stored in the basement.
a. Three-story annex housing offices and a kitchen.

28. Department for the construction of truck cabs and loading platforms. A wood drying department was attached. In 1949, the truck cabs were made of metal and wood. The construction of all metal cabs was scheduled but the necessary equipment was not yet available. The completed bodies were moved on a conveyor belt (a) to the truck assembly shop.

29. Spring department, equipped with several presses for processing and assembling springs.
a. Conveyor belt for the transportation of completed springs to the assembly shop.

30. Small transformer station connected with Foundry No.1 and the spring department.

31. Forge, called Provka by Russian workers. The iron was rough-forged and the rods were then straightened.

32. Small transformer station, supplying the forge and other sections of the plant.

33. Die department in which dies for the forges and pressing shops were processed.

34. Hardening shop for dies, equipped with several oil-fired annealing furnaces and oil baths.

35. Storage dump for pig iron, equipped with German-made 10-ton crane.

36. Drop forge where all kinds of motor vehicle components, such as axles, crankshafts, and fittings were processed. There was also a hardening shop and a grinding shop.

37. Punching shop, equipped with several punches and presses.

38 and
39. Forge for extremely heavy forgings. The departments were equipped with especially heavy hammers with compressors.

40. Mess hall.

41. Electric department and garage for maintenance and parking of the electric trucks used in the plant.

42. Warehouse for motor vehicle component parts supplied from outside plants, including rims and storage batteries.

43. Foundry No. 2. Rear axles were cast in this foundry. Also housings for universal joints and clutches and similar items were produced.
a. Furnace shop with coke-fired ovens and three electric smelting furnaces.
b. Grinding shop and hardening shop.
c. Administration building of the foundry and mess hall.

44. Scrap dump.

45. Two storage sheds including one for the storage of finished castings.

46. Foundry No. 3 used primarily for the casting of engine blocks, brake drums and piston rings. The waste percentage was particularly high.

47. Storage sheds and loading ramp for the shipment of completed motor vehicles.

48. Carpentry shop for plant requirements.

49. Wooden fence.

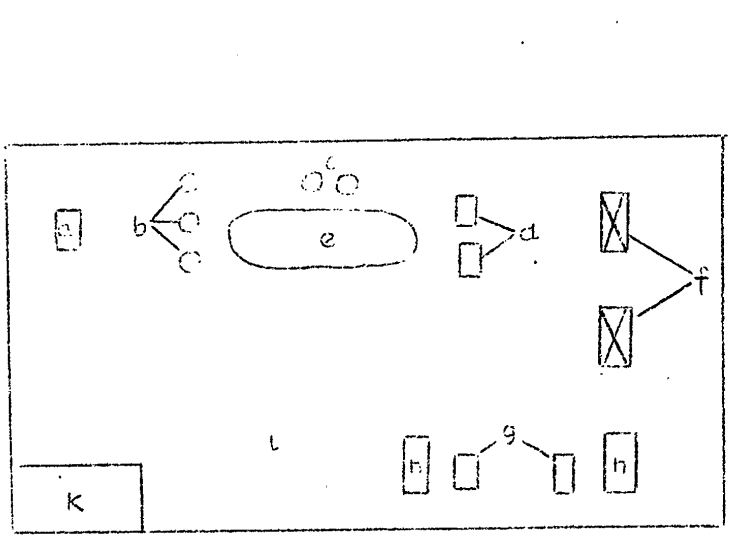
50. Plant streets. The street passing through the center of the plant was unusually wide and was bordered by strips of grass.

51. Industrial and harbor area with locomotive repair shop, box factory, wood dump, storage site for molding sand, and storage site for material dismantled in Eastern Germany.

52. TES station, still being expanded.
a. Boilerhouse, equipped with 4 boilers.
b. Turbine shop.
c. Smokestack, 120 meters high.
d. Conveyor belts.
e. Coal crusher and elevator.
f. Coal bunker.
g. Coal dump.
h. Water purification installation.
i. Transformer station.

53. Freight station.

Layout Sketch of Foundry No. 2 of the ZIS Automobile Plant in Moscow



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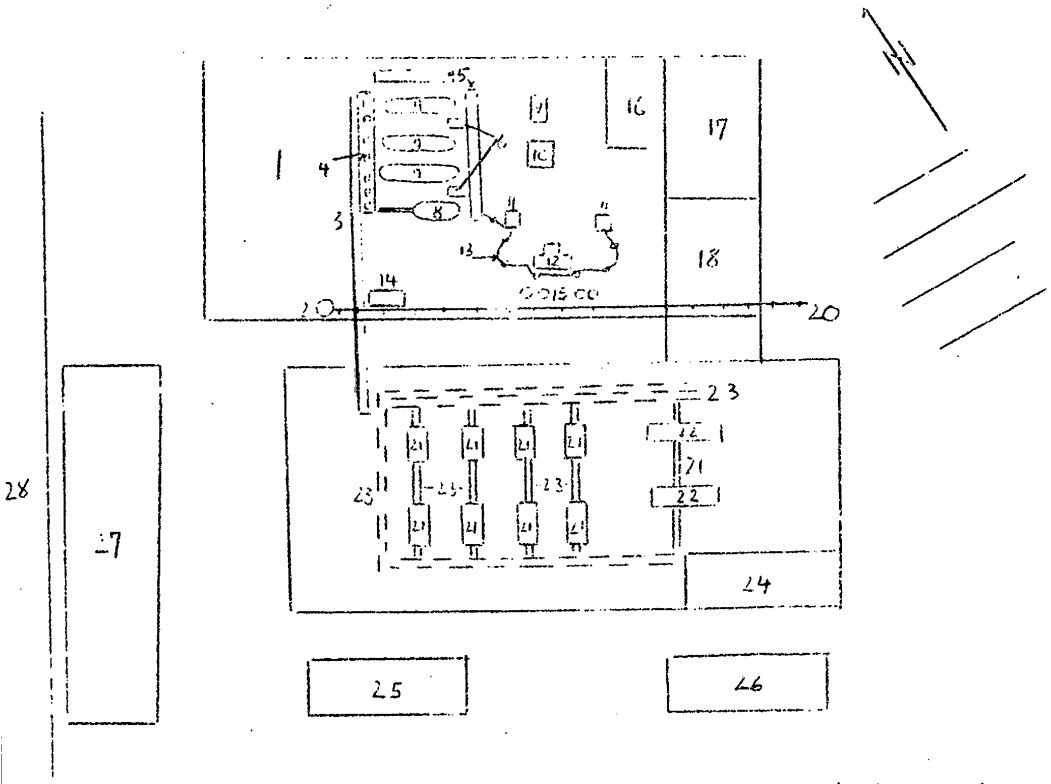
Legend:

a. Sand preheater.
b. Three coke-fired smelting furnaces. Gear wheels, frame components and girders for subway tunnels were cast here.
c. Two electric steel furnaces, also used for the casting of ball bearings. There were molds in radial arrangement for the simultaneous casting of 100 balls of different sizes ranging from 70 mm to 20 mm in diameter.
d. Two mold tilting machines used in emptying the molds. The rough edges of the castings were removed at the same time.
e. Conveyor belt for molds.
f. Two 5-ton ceiling cranes.
g. Molding machines.
h. Drying furnaces for molds.
i. Coremaking shop.
k. Storage area for molding sand.

Layout Sketch of Foundry No. 2 of the ZIS Automobile Plant in Moscow



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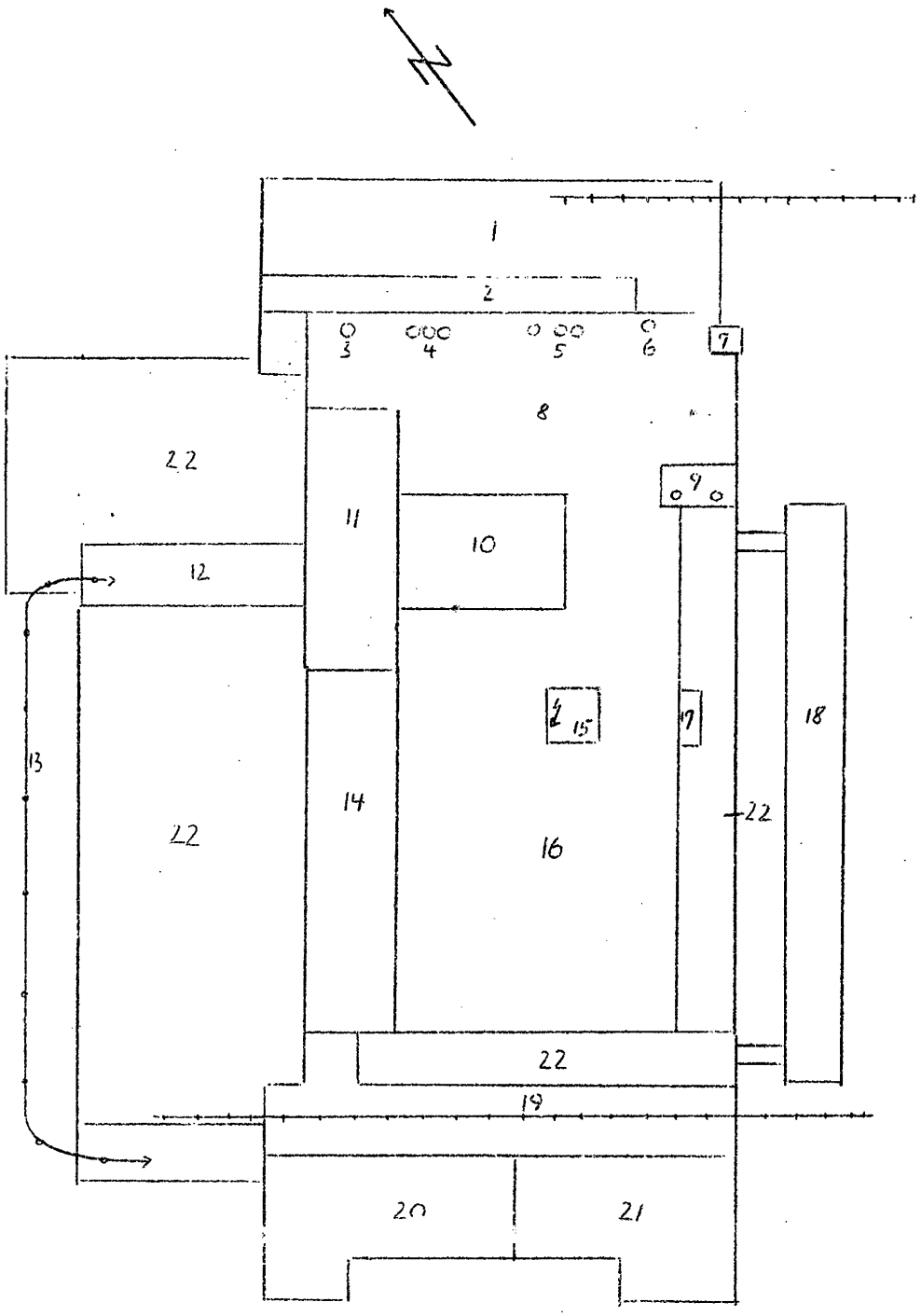
Legend:

1. Core making shop.
2. Elevator for molding sand, about 12 meters high.
3. Conveyor belt for moving finished castings to the hardening shop.
4. A great number of vibrating grates used in emptying the molds.
5. Many large and small molding machines.
6. Two platforms.
7. Three large conveyor belts for molds.
8. A small conveyor belt for molds.
9. Transformer.
10. New electric furnace under construction.
11. Two electric furnaces in operation.
12. Transformer.
13. Crane runway for ladles to be moved to the conveyor belts for molds.
14. Office of the foreman.
15. Four coke-fired smelting furnaces. Two of the furnaces remained in operation while the other two furnaces were being cleaned and charged. Part of the liquid steel in the electric furnaces was melted with unidentified ingredients before being cast.
16. Department for the preparation of molding sand.
17. Storage space for molding sand.
18. Room used to store lime, ore and scrap.
19. Scrap dump outside the workshop.
20. Railroad track.
21. Eight small annealing furnaces.
22. Two large annealing furnaces.
23. Track installation used to transport materials to and from the furnaces.
24. Grinding shop equipped with several grinding machines, also used as storage room.
25. Warehouse.
26. Warehouse for finished castings.
27. Office building and mess hall.
28. Main street of the plant.

Layout Sketch of Foundry No. 3 of the ZIS Automobile Plant in Moscow



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Legend:

1. Storage room for coke and pig iron.
2. Charging installation.
3. Coke-fired smelting furnace, under construction in the summer of 1949.
4. Three coke-fired smelting furnaces, in operation.
5. Three coke-fired smelting furnaces, not in operation in 1949.
6. Electric steel furnace, in operation.
7. Tower, use was unknown.
8. Foundry shop, equipped with two conveyor belts for molds, several small and six large molding machines.
9. Two small American-made electric steel furnaces used in casting piston rings.
10. Molding shop, equipped with conveyor belts for the finished molds.
11. Mechanical repair shop.
12. Conveyor belt used to transport finished castings to the cleaning shop.
13. Suspended conveyor belt outside the workshop building.
14. Room still vacant in August 1949.
15. Transformer.
16. Core making shop.
17. Transformer.
18. Three-story building housing administrative offices and laboratories.
19. Storage room for molding sand.
20. Shop for cleaning castings.
21. Grinding shop.
22. Unidentified rooms.

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